Docket No. 14-0494
ICC Staff Exhibit 3.0N

**NEED TESTIMONY**

# REBUTTAL TESTIMONY

**OF**

**GREG ROCKROHR**

SAFETY AND RELIABILITY DIVISION
ILLINOIS COMMERCE COMMISSION

MidAmerican Energy Company
d/b/a MidAmerican

DOCKET NO. 14-0494

Application of MidAmerican Energy Company for (i) a Certificate of Public Convenience and Necessity, pursuant to Section 8-406 of the Public Utilities Act, to construct, operate and maintain a 345,000 volt electric transmission line in Rock Island, Mercer, Henry and Knox Counties, Illinois; (ii) an order pursuant to Section 8-503 of the Public Utilities Act approving construction of the 345,000 volt electric transmission line; (iii) an order pursuant to Section 8-509 of the Public Utilities Act authorizing use of eminent domain; and (iv) such other relief as may be necessary.

April 2, 2015

# Table of Contents

**Introduction**

Q. **What is your name and business address?**

A. My name is Greg Rockrohr. My business address is 527 East Capitol Avenue, Springfield, Illinois 62701.

Q. **Are you the same Greg Rockrohr who previously submitted direct testimony in this proceeding?**

A. Yes. My direct testimony, filed on December 11, 2014, consists of two documents: (1) ICC Staff Ex. 1.0N, which discusses project need and (2) ICC Staff Ex. 1.0, which discusses topics other than project need.

Q. **What is the purpose of your rebuttal testimony identified as "Need Testimony"?**

A. My rebuttal testimony identified as "Need Testimony" responds to MidAmerican Energy Company's ("MEC") rebuttal testimony associated with project need, which MEC filed on March 5, 2015. In its rebuttal testimony covering project need, MEC provides new information intended to demonstrate that a need exists for its proposed project regardless of whether two other transmission projects that the Commission recently approved are also constructed. Specifically, Mr. Thomas C. Mielnik (MidAmerican Ex. 10.0N), Mr. James P. Swanson (MidAmerican Ex. 11.0N), and Dr. Todd Schatzki (MidAmerican Ex. 14.0N) testify that a need exists for MEC's proposed 345 kV transmission line between MEC's Oak Grove Substation and ATXI's proposed Sandburg Substation regardless of whether Rock Island Clean Line's high-voltage DC transmission line approved in Docket No. 12-0560 and/or ComEd's Grand Prairie Gateway 345 kV transmission line approved

in Docket 13-0657 are constructed. My rebuttal testimony provides and explains my conclusions about MEC's demonstration of project need.

As the Second Revised Case Management Plan requires[1], my rebuttal testimony is segregated into two documents: Staff Exhibit 3.0N, discusses the need for MEC's proposed 345 kV transmission line, and Staff Exhibit 3.0 discusses topics other than need.

Q. **Do MEC witnesses' rebuttal testimonies about need cause you to modify any of your conclusions about project need that you presented in direct testimony?**

A. Yes. In my direct testimony I concluded that, because MEC's studies intended to demonstrate project need did not consider the Rock Island Clean Line high-voltage direct current ("DC") transmission line that the Commission approved in Docket 12-0560, MEC had not yet adequately demonstrated that its project was needed. With its rebuttal testimony, MEC successfully demonstrates that its proposed 345 kV transmission line will promote the development of an effectively competitive electricity market that operates efficiently, is equitable to all customers, and is the least cost means of satisfying those objectives whether the Rock Island Clean Line is completed or not. Though I am not an attorney, it is my understanding that MEC's demonstration satisfies the requirements of the second criterion path included in Section 8-406(b) of the Public Utilities Act, which the Commission uses to determine whether a utility should construct an electric transmission line.[2]

[1] *Second Revised Case Management Plan*, 3, Oct. 20, 2014.
[2] Staff Ex. 1.0N, 3.

**Information MEC provides in rebuttal testimony**

Q. **What new information did MEC provide in its rebuttal testimony?**

A. MEC provides the results of power flow and cost benefit studies that include two recently approved transmission lines that MEC excluded from its studies presented in its direct testimony: the Rock Island Clean Line project that I previously mentioned, and Commonwealth Edison Company's proposed 345 kV line in north central Illinois that ComEd identifies as its Grand Prairie Gateway project. In my direct testimony I noted that the transmission model results that MEC presented in direct testimony did not include the Rock Island Clean Line project: a high-voltage DC transmission line that the Commission recently approved in Docket No. 12-0560. Separately, in data requests, I also asked MEC to provide the results from power flow studies that include the ComEd's Grand Prairie Gateway project, which the Commission recently approved in Docket No. 13-0657. I reasoned that it was possible these two projects, that neither MISO nor MEC included in power flow studies, might provide some of the market efficiency that MISO intended MVP-16 to provide, so that MVP-16 might no longer be necessary.[3]

Response to the Rebuttal Testimony of MEC Witness Mr. Mielnik

Q. **What new information does Mr. Mielnik provide in MidAmerican Ex. 10.0N?**

A. Mr. Mielnik's rebuttal testimony includes the results of power flow studies that demonstrate MVP-16 is necessary to mitigate transmission line overloads under specific contingency conditions even if the projects contemplated in Docket Nos. 12-0560 and 13-0657 are completed.[4] When describing his conclusions, Mr.

[3] Staff Ex. 1.0N, 15.
[4] MidAmerican Ex. 10.0N, 7-11: Tables R1- R4. Mr. Mielnik explains that Table 1 after Line 189 of his direct testimony should be replaced by Table R1 from his rebuttal testimony.

Mielnik explains that PJM, the Regional Transmission Operator for the area in which Rock Island Clean Line plans to terminate its proposed high-voltage DC transmission line, studied the effect the Rock Island Clean Line project will have on the transmission system it operates. PJM determined that numerous reliability violations will exist within the PJM footprint if the Rock Island Clean Line injects more than 700 MW at the proposed conversion station in northeastern Illinois. MEC's power flow studies, therefore, assume that the Rock Island Clean Line, if constructed, will provide a maximum firm capacity of 700 MW.[5]

Q. **What is your response to Mr. Mielnik's rebuttal testimony?**

A. I find that Tables R1 through R4 on pages 7-12 of Mr. Mielnik's rebuttal testimony adequately demonstrate that a need exists for MVP-16 even if one or both of the transmission lines approved in Docket Nos. 12-0560 and 13-0657 are constructed. These tables illustrate that under certain scenarios where specific transmission elements are out of service - scenarios that must be examined per North American Electric Reliability Corporation ("NERC") Transmission Planning Standards – MVP-16 is necessary to mitigate projected overloads, even if the Rock Island Clean Line project and/or ComEd's Grand Prairie Gateway project are in service. A comparison of Table R1 and R4 illustrates that if both the Rock Island Clean Line project and ComEd's Grand Prairie Gateway project are completed, anticipated power flow constraints for three NERC Category B events (Novelty to Adair 161 kV, Glidden 138 kV Bus Tie, and H440 to Steward 138 kV) and one Category C event (Belvidere to Crystal Lake 138 kV)[6] would be successfully mitigated even

[5] MidAmerican Ex. 10.0N, 6-7.
[6] Tables R1 – R4 in MidAmerican Ex. 10.0N appears to list only one of the two transmission elements out-of-service for the contemplated NERC category C events.

without MVP-16. However, Table R4 illustrates that several other transmission constraints would remain without MVP-16. I also found Mr. Mielnik's explanation for limiting the capacity of the Rock Island Clean Line to 700 MW in MEC's power flow studies based upon PJM's studies to be reasonable.[7]

Response to the Rebuttal Testimony of MEC Witness Dr. Schatzki

Q. **What new information does Dr. Schatzki provide in his rebuttal testimony?**

A. Dr. Schatzki's rebuttal testimony explains his conclusion that MVP-16 is necessary to promote the development of an effectively competitive electricity market that operates efficiently and is equitable to all customers regardless of whether the Rock Island Clean Line project and/or ComEd's Grand Prairie Gateway project are constructed.[8] With MidAmerican Ex. 14.2.2N, Dr. Schatzki provides study results comparable to MidAmerican Ex. 8.4N Updated, only MidAmerican Ex. 14.2.2N assumes that the Rock Island Clean Line project and ComEd's Grand Prairie Gateway project are both in service. MidAmerican Ex. 14.2.2N indicates that, in three of the four possible policy/economic outcomes (future scenarios) that Dr. Schatzki studied, completion of MVP-16 would result in lower payments by customers for electricity due to projected reductions in wholesale energy prices. Dr. Schatzki's studies also show that MVP-16 will provide increased supply of wind power into the MISO region in all cases and scenarios evaluated. Dr. Schatzki concludes that under one specific future scenario, the Combined Energy Policy scenario[9], if both Rock Island Clean Line and ComEd's Grand Prairie Gateway projects are completed, MVP-16 is unlikely to provide a cost benefit to customers.

[7] MidAmerican Ex. 10.0N, 6-7.
[8] MidAmerican Ex. 14.0N, 2-3, 16.
[9] MidAmerican Ex. 8.2, 9 includes a description of each scenario studied.

Dr. Schatzki explains, however, that this single scenario is unlikely to occur, and even if it did, the additional supply that MVP-16 would supply is pro-competitive.[10]

Q. **What is your response to Dr. Schaztki's rebuttal testimony?**

A. I agree with Dr. Schatzki that MVP-16 will allow Illinois customers access to additional renewable energy from wind resources to the west of Illinois. Dr. Schatzki provides the results from his studies that indicate locational marginal prices, and therefore customer payments for energy, will be lower if MVP-16 is constructed regardless of whether the Rock Island Clean Line project and ComEd's Grand Prairie Gateway project are built. Dr. Schatzki's study results also indicate that MVP-16 will increase the availability of wind energy in every future scenario considered, regardless of whether the Rock Island Clean Line project and/or ComEd's Grand Prairie Gateway project are constructed.

Q. **Dr. Schatzki finds that for one future scenario, identified as the "Combined Energy Policy Future", MVP-16 may not result in an incremental decrease in customer payments for energy if both the Rock Island Clean Line project and ComEd's Grand Prairie Gateway project are completed. Does Dr. Schatzki's finding, illustrated in MidAmerican Ex. 14.2.1N, concern you?**

A. No. It is my understanding that Dr. Schatzki's study results indicate that only under one of the future scenarios studied, identified as "Combined Energy Policy," MVP-16 may not provide a cost benefit to customers, but only if both the Rock Island Clean Line project and ComEd's Grand Prairie Gateway project are completed. In Dr. Schatzki's studies, the "Combined Energy Policy" future "assumes multiple

[10] MidAmerican Ex. 14.0N, 18-19.

energy policies are enacted, including a 20 percent federal RPS, a carbon cap modeled on the Waxman-Markey Bill, implementation of a smart grid and widespread adoption of electric vehicles."[11] I do not know how likely the "Combined Energy Policy" scenario is to occur, but in my opinion it is very unlikely that actual conditions in the years 2021 and 2026, which are the years specifically identified in Dr. Schatzki's study results, will exactly match any of the future scenarios in Dr. Schatzki's studies. I think it far more likely that actual conditions will be some combination of the possible future scenarios that Dr. Schatzki considers.[12] Dr. Schatzki's use of these future scenarios is appropriate because it provides a useful risk assessment tool, and his study results indicate that it is far more likely than not that construction of MVP-16 will result in savings for customers. Again, to be clear, there is no guarantee that the future will match any of the future scenarios that Dr. Schatzki's studies contemplate. However, given Dr. Schatzki's study results that show customers are likely to experience lower energy prices as a result of MVP-16, and that show customers would have access to a larger supply of renewable energy, Dr. Schaztki's rebuttal testimony demonstrates that MVP-16, including MEC's portion of MVP-16 that is the subject of this docket, will promote the development of an effectively competitive electricity market that operates efficiently and is equitable to all customers.

Response to the Rebuttal Testimony of MEC Witness Mr. Swanson

Q. **What new information does Mr. Swanson provide in MidAmerican Ex. 11.0N?**

[11] MidAmerican Ex. 8.2N, 10.
[12] Staff Ex. 1.0N, 10-11.

A. Mr. Swanson' rebuttal testimony explains that, in addition to relieving the projected 2021 overloads on transmission lines previously identified in his direct testimony, MEC's proposed Oak Grove to Sandburg 345 kV line that is the subject of this docket would alleviate projected overloads on two existing 161/138 kV substation transformers, located at Ameren Illinois Company's Galesburg Substation. Mr. Swanson further explains that since MISO would not include as part of MVP-16 a separate project to install only an extra-high capacity 161 kV line to mitigate projected overloads, the costs for such a project would be allocated to only MEC's customers. In contrast, since it would be included in MVP-16, costs for the 345/161 kV double-circuit line that MEC proposes would be allocated to customers across the entire MISO footprint. If the Oak Grove to Sandburg 345 kV line is not built, and instead the 161 kV line is reconstructed as an extra-high capacity 161 kV line to provide adequate capacity, additional studies would be required to determine if additional overloads would exist during double-contingency outages (two transmission elements out of service).[13] Mr. Swanson concludes that only reconstructing the 161 kV line between Oak Grove and Galesburg would result in higher costs for MEC's customers than would the proposed double-circuit 345/161 kV Oak Grove to Sandburg line.[14] Mr. Swanson provides power flow analyses to illustrate that the 161 kV from Oak Grove Substation to Mercer Substation will require reinforcement even if the Rock Island Clean Line Project and/or ComEd's Grand Prairie Gateway Project are completed.[15]

[13] MidAmerican Ex. 11.0N, 5.
[14] MidAmerican Ex. 11.0N, 6-7.
[15] MidAmerican Ex. 11.5N. Mercer Substation is AIC's planned 161/12 kV substation to be connected to the 161 kV line between Oak Grove and Galesburg.

Q. **What is your response to Mr. Swanson's rebuttal testimony?**

A. I already agree with Mr. Swanson in direct testimony that a double-circuit 345/161kV transmission line between Oak Grove and Sandburg, rather than only reconstructing the existing 161 kV transmission line, is a superior method to address MEC's projected transmission system overloads.[16] With MidAmerican Exhibits 11.4N, 11.5N, and 11.6N, Mr. Swanson adequately demonstrates that even if one or both of the Rock Island Clean Line and ComEd's Grand Prairie Gateway projects are completed, MVP-16, or some alternative project will be necessary to mitigate overloads on its Oak Grove to Galesburg 161 kV line. The projected transformer overloads at AIC's Galesburg Substation simply reinforces my opinion that MEC's proposed double-circuit 345/161kV transmission line between Oak Grove and Sandburg is the superior method to address projected transmission system overloads, especially since Dr. Schatzki's rebuttal testimony separately demonstrates that MEC's proposed 345 kV line will also promote the development of an effectively competitive electricity market that operates efficiently and is equitable to all customers. The same 345 kV line that adequately relieves the overloads that Mr. Swanson's rebuttal testimony identifies will also mitigate transmission constraints that Mr. Mielnik's rebuttal testimony identifies, and promote the development of an effectively competitive market, as Dr. Schatzki's rebuttal testimony demonstrates.

[16] Staff Ex. 1.0N, 11-14.

**Conclusion**

Q. **What is your conclusion regarding the 345 kV line that MEC proposes in this docket?**

A. I conclude that the primary benefit MEC's proposed 345 kV line would provide, if built, would be to promote the development of an effectively competitive electricity market that operates efficiently and is equitable to all customers. MEC's proposed 345 kV line, which is a component of MVP-16, therefore satisfies the second criteria identified in Section 8-406(b) of the Act (promote development of an effectively competitive market) by providing access to lower cost generation to satisfy RPS requirements. In rebuttal testimony, MEC adequately demonstrates that its proposed 345 kV line, as part of MVP-16, would promote the development of an effectively competitive market even if one or both the Rock Island Clean Line project (approved in Docket No. 12-0560) and ComEd's Grand Prairie Gateway project (approved in Docket No. 13-0657) are constructed. MEC's proposed 345 kV line will also mitigate transmission system constraints, including projected overloads on the 161 kV line that will supply AIC's proposed Mercer Substation. These transmission system constraints could be mitigated by different transmission project(s), but at greater cost to MEC's customers, since those different projects and costs would not be part of MISO's MVP portfolio, and therefore would be allocated only to MEC's customers rather than across the MISO footprint.

Q. **Does this conclude your prepared rebuttal testimony regarding project need?**

A. Yes.